

Application/Control Number: 09/580,485

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**IN THE CLAIMS:**

1. (Previously Amended) A method for manufacturing an electrical device, said method comprising:
  - forming at least a thin film transistor on an insulating surface;
  - forming a first insulating film comprising an organic resin over the thin film transistor;
  - forming a second insulating film comprising silicon nitride on the first insulating film;
  - forming a pixel electrode on the second insulating film, said pixel electrode electrically connected to the thin film transistor;
  - forming an EL layer over the pixel electrode;
  - forming a second electrode over the EL layer,
  - wherein the EL layer is selectively formed through an ink jet method.
  
2. (Previously Amended) A method for manufacturing an electrical device, said method comprising:
  - forming at least a thin film transistor;
  - forming a first insulating film comprising an organic resin over the thin film transistor;
  - forming a second insulating film comprising at least one selected from the group consisting of aluminum oxide, aluminum nitride and nitrated aluminum oxide on the first insulating film;
  - forming a pixel electrode over the second insulating film, said pixel electrode electrically connected to the thin film transistor;
  - forming an EL layer over the pixel electrode;
  - forming a second electrode over the EL layer,
  - wherein the EL layer is selectively formed through an ink jet method.

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3. (Previously Amended) A method for manufacturing an electrical device, said method comprising:

forming at least a thin film transistor on an insulating surface;

forming a first insulating film comprising an organic resin over the thin film transistor;

forming a second insulating film comprising diamond like carbon on the first insulating film;

forming a pixel electrode over the second insulating film, said pixel electrode electrically connected to the thin film transistor;

forming a EL layer over the pixel electrode;

forming a second electrode over the EL layer;

wherein the EL layer is selectively formed through an ink jet method.

4. (Previously Amended) A method for manufacturing an electrical device, said method comprising:

forming at least a thin film transistor on an insulating surface;

forming a first insulating film comprising silicon nitride over the thin film transistor;

forming a second insulating film comprising an organic resin on the first insulating film;

forming a third insulating film comprising silicon nitride on the second insulating film, wherein the third insulating film comprises the same material as the first insulating film;

forming a pixel electrode over the third insulating film, said pixel electrode electrically connected to the thin film transistor;

forming an EL layer over the pixel electrode;

forming a second electrode over the EL layer;

wherein the EL layer is selectively formed through an ink jet method.

5. (Previously Amended) A method for manufacturing an electrical device comprising:

forming at least a thin film transistor on an insulating surface;

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forming a first insulating film comprising at least one selected from the group consisting of aluminum oxide, aluminum nitride and nitrated aluminum oxide over the thin film transistor;

forming a second insulating film comprising an organic resin on the first insulating film;

forming a third insulating film comprising at least the one selected from the group consisting of aluminum oxide, aluminum nitride and nitrated aluminum oxide on the second insulating film, wherein the third insulating film comprises the same material as the first insulating film;

forming a pixel electrode over the third insulating film, said pixel electrode electrically connected to the thin film transistor;

forming an EL layer over the pixel electrode;

forming a second electrode over the EL layer,

wherein the EL layer is selectively formed through an ink jet method.

8. (Original) A method according to claim 1, wherein the EL layer is an organic material.

9. (Original) A method according to claim 1, wherein the ink jet method uses a piezo element.

13. (Original) A method according to claim 2, wherein the EL layer is an organic material.

14. (Original) A method according to claim 2, wherein the ink jet method uses a piezo element.

15. (Original) A method according to claim 3, wherein the EL layer is an organic material.

16. (Original) A method according to claim 3, wherein the ink jet method uses a piezo element.

17. (Original) A method according to claim 4, wherein the EL layer is an organic material.

18. (Original) A method according to claim 4, wherein the ink jet method uses a piezo element.

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19. (Original) A method according to claim 5, wherein the EL layer is an organic material.

20. (Original) A method according to claim 5, wherein the ink jet method uses a piezo element.

30. (Currently amended) A method according to claim 1, wherein ~~one of the pixel electrode and the second electrode~~ comprises at least one selected from the group consisting of magnesium (Mg), lithium (Li), cesium (Cs), barium (Ba), potassium (K), beryllium (Be), or calcium (Ca).

31. (Previously Amended) A method according to claim 1, wherein the second insulating film comprises at least one selected from the group consisting of silicon nitride oxide and silicon nitride.

33. (Currently amended) A method according to claim 2, wherein ~~one of the pixel electrode and the second electrode~~ comprises at least one selected from the group consisting of magnesium (Mg), lithium (Li), cesium (Cs), barium (Ba), potassium (K), beryllium (Be), or calcium (Ca).

36. (Currently amended) A method according to claim 3, wherein ~~one of the pixel electrode and the second electrode~~ comprises at least one selected from the group consisting of magnesium (Mg), lithium (Li), cesium (Cs), barium (Ba), potassium (K), beryllium (Be), or calcium (Ca).

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37. (Currently amended) A method according to claim 4, wherein ~~one of the pixel electrode and the second electrode~~ comprises at least one selected from the group consisting of magnesium (Mg), lithium (Li), cesium (Cs), barium (Ba), potassium (K), beryllium (Be), or calcium (Ca).

38. (Previously Added) A method according to claim 4, wherein the EL layer is formed in a dry nitrogen atmosphere.

39. (Currently amended) A method according to claim 5, wherein ~~one of the pixel electrode and the second electrode~~ comprises at least one selected from the group consisting of magnesium (Mg), lithium (Li), cesium (Cs), barium (Ba), potassium (K), ~~beryllium (Be)~~, or calcium (Ca).

40. (Previously Added) A method according to claim 5, wherein the EL layer is formed in a dry argon atmosphere.

41. (Previously Added) A method according to claim 1, further comprising:  
forming a contact hole in the first and second insulating films,  
wherein an upper diameter of the contact hole is longer length than a lower diameter of the contact hole.

42. (Currently amended) A method according to claim 1, further comprising:  
forming a contact hole in the first and second insulating films;  
forming the pixel electrode on the second insulating film,  
~~wherein the second insulating film is not in contact with side surfaces of the contact hole while the pixel electrode is in contact with the side surface of the contact hole and edges of the first and second insulating films.~~

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43. (Previously Added) A method according to claim 2, further comprising:  
forming a contact hole in the first and second insulating films,  
wherein an upper diameter of the contact hole is longer length than a lower diameter  
of the contact hole.

44. (Currently amended) A method according to claim 2, further comprising:  
forming a contact hole in the first and second insulating films;  
forming the pixel electrode on the second insulating film,  
~~wherein the second insulating film is not in contact with side surfaces of the contact~~  
~~hole while the pixel electrode is in contact with the side surface of the contact hole and edges~~  
of the first and second insulating films.



45. (Previously Added) A method according to claim 3, further comprising:  
forming a contact hole in the first and second insulating films,  
wherein an upper diameter of the contact hole is longer length than a lower diameter  
of the contact hole.

46. (Currently amended) A method according to claim 3, further comprising:  
forming a contact hole in the first and second insulating films;  
forming the pixel electrode on the second insulating film,  
~~wherein the second insulating film is not in contact with side surfaces of the contact~~  
~~hole while the pixel electrode is in contact with the side surface of the contact hole and edges~~  
of the first and second insulating films.

47. (Previously Added) A method according to claim 4,  
wherein the third insulating film comprises at least one selected from the group  
consisting of silicon nitride oxide and silicon nitride.

48. (Previously Added) A method according to claim 4, further comprising:  
forming a contact hole in the first, second and third insulating films,  
wherein an upper diameter of the contact hole is longer length than a lower diameter  
of the contact hole.

49. (Previously Added) A method according to claim 4, further comprising:  
forming a contact hole in the first, second and third insulating films;  
forming the pixel electrode on the third insulating film,  
wherein the third insulating film is not in contact with side surfaces of the contact  
hole while the pixel electrode is in contact with the side surface of the contact hole and edges  
of the first, second and third insulating films.

50. (Previously Added) A method according to claim 5, further comprising:  
forming a contact hole in the first, second and third insulating films,  
wherein an upper diameter of the contact hole is longer length than a lower diameter  
of the contact hole.

51. (Previously Added) A method according to claim 5, further comprising:  
forming a contact hole in the first, second and third insulating films;  
forming the pixel electrode on the third insulating film,  
wherein the third insulating film is not in contact with side surfaces of the contact  
hole while the pixel electrode is in contact with the side surface of the contact hole and edges  
of the first, second and third insulating films.

52. (Previously Added) A method for manufacturing an electrical device  
comprising:  
forming at least a thin film transistor on an insulating surface;  
forming a first insulating film comprising diamond like carbon over the thin film  
transistor;



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forming a second insulating film comprising an organic resin on the first insulating film;

forming a third insulating film comprising diamond like carbon on the second insulating film, wherein the third insulating film comprises the same material as the first insulating film;

forming a pixel electrode over the third insulating film, said pixel electrode electrically connected to the thin film transistor;

forming an EL layer over the pixel electrode;

forming a second electrode over the EL layer,

wherein the EL layer is selectively formed through an ink jet method.

53. (Previously Added) A method according to claim 52, wherein the EL layer is an organic material.

54. (Previously Added) A method according to claim 52, wherein the ink jet method uses a piezo element.

55. (Currently amended) A method according to claim 52, wherein ~~one of the pixel electrode and the second electrode~~ comprises at least one selected from the group consisting of magnesium (Mg), lithium (Li), cesium (Cs), barium (Ba), potassium (K), beryllium (Be), or calcium (Ca).

56. (Previously Added) A method according to claim 52, further comprising:  
forming a contact hole in the first, second and third insulating films,  
wherein an upper diameter of the contact hole is longer length than a lower diameter of the contact hole.

57. (Previously Added) A method according to claim 52, further comprising:  
forming a contact hole in the first, second and third insulating films;  
forming the pixel electrode on the third insulating film,

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wherein the third insulating film is not in contact with side surfaces of the contact hole while the pixel electrode is in contact with the side surface of the contact hole and edges of the first, second and third insulating films.

58. (Previously Added) A method for manufacturing an electrical device, said method comprising:

- forming at least a thin film transistor on an insulating surface;
- forming a first insulating film over the thin film transistor;
- forming a second insulating film on the first insulating film;
- forming a third insulating film on the second insulating film;
- forming a fourth insulating film on the third insulating film;
- forming a contact hole in the second, third and fourth insulating films;
- forming a pixel electrode over the fourth insulating film, said pixel electrode electrically connected to the thin film transistor through the contact hole;
- forming a bank on the fourth insulating film;
- forming an EL layer over the pixel electrode;
- forming a second electrode over the EL layer;
- forming a protection electrode over the second electrode;
- forming a fifth insulating film over the protection electrode;
- wherein the EL layer is selectively formed through an ink jet method,
- wherein the third insulating film comprises an organic material,
- wherein the EL layer is formed in a dry nitrogen atmosphere.

59. (Previously Added) A method according to claim 58, wherein the EL layer is an organic material.

60. (Previously Added) A method according to claim 58, wherein the ink jet method uses a piezo element.

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61. (Currently amended) A method according to claim 58, wherein ~~one of the pixel electrode and the second electrode~~ comprises at least one selected from the group consisting of magnesium (Mg), lithium (Li), cesium (Cs), barium (Ba), potassium (K), beryllium (Be), or calcium (Ca).

62. (Previously Added) A method according to claim 58, wherein an upper diameter of the contact hole is longer length than a lower diameter of the contact hole.

63. (Previously Added) A method according to claim 58, wherein the fourth insulating film is not in contact with side surfaces of the contact hole while the pixel electrode is in contact with the side surface of the contact hole and edges of the second, third and fourth insulating films.

64. (Previously Added) A method according to claim 58, wherein each of second, fourth and fifth insulating films comprises a same material.

65. (Previously Added) A method for manufacturing an electrical device, said method comprising:

- forming at least a thin film transistor on an insulating surface;
- forming a first insulating film over the thin film transistor;
- forming a second insulating film on the first insulating film;
- forming a third insulating film on the second insulating film;
- forming a fourth insulating film on the third insulating film;
- forming a contact hole in the second, third and fourth insulating films;
- forming a pixel electrode over the fourth insulating film, said pixel electrode electrically connected to the thin film transistor through the contact hole;
- forming a bank on the fourth insulating film;
- forming an EL layer over the pixel electrode;
- forming a second electrode over the EL layer;
- forming a protection electrode over the second electrode;
- forming a fifth insulating film over the protection electrode;

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wherein the EL layer is selectively formed through an ink jet method,  
wherein the third insulating film comprises an organic material,  
wherein the EL layer is formed in a dry argon atmosphere.

66. (Previously Added) A method according to claim 65, wherein the EL layer is an organic material.

67. (Previously Added) A method according to claim 65, wherein the ink jet method uses a piezo element.

68. (Currently amended) A method according to claim 65, wherein one of the pixel electrode and the second electrode comprises at least one selected from the group consisting of magnesium (Mg), lithium (Li), cesium (Cs), barium (Ba), potassium (K), beryllium (Be), or calcium (Ca).

69. (Previously Added) A method according to claim 65, wherein an upper diameter of the contact hole is longer length than a lower diameter of the contact hole.

70. (Previously Added) A method according to claim 65, wherein the fourth insulating film is not in contact with side surfaces of the contact hole while the pixel electrode is in contact with the side surface of the contact hole and edges of the second, third and fourth insulating films.

71. (Previously Added) A method according to claim 65, wherein each of second, fourth and fifth insulating films comprises a same material.

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